

latis petiolis usque ad 5 mm. longis laminis foliorum coriaceis ellipticis 1.5--2 cm. longis 1--1.2 cm. latis apicaliter rotundis marginaliter antrorse serrulatis basaliter cuneato-acuminatis recedit.

This variety differs from the typical form of the species in its leaves being distinctly petiolate, the petioles to 5 mm. long, the blades coriaceous, elliptic, 1.5--2 cm. long, 1--1.2 cm. wide, apically rounded in outline, marginally antrorsely serrulate from the widest part to the apex, basally cuneate-acuminate into the petiole.

The variety is based on *Hatschbach* 46523 from rocky soil on campo rupestre at the airfield in the municipality of Rio de Contes, Bahia, Brazil, collected on May 17, 1983, and deposited in the Lundell Herbarium at the University of Texas. The collector describes the fresh corollas as blue.

*STACHYTARPHETA VILLOSA* var. *BAHIENSIS* Mold., var. nov.

Haec varietas a forma typica speciei petiolis 3--5 mm. longis laminis foliorum lanceolatis 1.5--4.5 cm. longis 1.2--2 cm. latis inflorescentiis laxioribus floribus sub anthesin divaricatis recedit.

This variety differs from the typical form of the species in its petioles being 3--5 mm. long, the leaf-blades lanceolate, 1.5--4.5 cm. long and 1.2--2 cm. wide, apically acute, marginally antrorsely serrulate, basally cuneate-attenuate, the inflorescence during full anthesis more loosely flowered, and the flowers more separate and divaricate.

The variety is based on *Hatschbach* 46386 from chapada in the vicinity of Aracatú, Bahia, Brazil, collected on May 14, 1983, and deposited in the Lundell Herbarium at the University of Texas. The collector describes the plant as a branched shrub, 1.5 m. tall, the corolla violet in color when fresh, with the tube white inside.

-----

#### ADDITIONAL NOTES ON THE *ERIOCAULACEAE*. XCIII

Harold N. Moldenke

*PAEPALANTHUS GLAZIOVII* Ruhl.

Additional bibliography: Mold., *Phytologia* 37: 44 (1977) and 38: 36. 1977; Mold., *Phytol. Mem.* 2: 154 & 613. 1980; Mold., *Phytologia* 50: 247 (1982) and 54: 236. 1983.

Recent collectors describe this plant as a subshrub, 70 cm. tall, the flower-heads white, and have encountered it in brejo and on flooded areas "formando moita na orla de mata", in both flower and fruit in August and November.

Additional citations: BRAZIL: Distrito Federal: *Filgueiras* 894 (N); *Héringer, Paula, Mendonça, & Salles* 48 (Fe, Ld). Goiás:

*Kinoshita & Tamashiro 3745 (Ld).*

*PAEPALANTHUS GLEASONII* Mold.

Additional bibliography: Mold., *Phytologia* 37: 44. 1977; Mold., *Phytol. Mem.* 2: 117, 122, 154, & 614. 1980.

*PAEPALANTHUS GLOBOSUS* Ruhl.

Additional bibliography: Mold., *Phytologia* 29: 483--484. 1974; Mold., *Phytol. Mem.* 2: 154 & 614. 1980.

*PAEPALANTHUS GNEISSICOLA* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 41: 481--482. 1979; Mold., *Phytol. Mem.* 2: 154, 425, & 614. 1980.

Additional citations: MOUNTED ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: pl. 77. 1928 (Ld).

*PAEPALANTHUS GOMESII* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 37: 44 & 51. 1977; Mold., *Phytol. Mem.* 2: 154 & 614. 1980.

Additional citations: MOUNTED ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: pl. 39. 1928 (Ld, W).

*PAEPALANTHUS GONÇALENSIS* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 35: 26. 1976; Mold., *Phytol. Mem.* 2: 154, 425, & 614. 1980.

Additional citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 260, pl. 172 prim.[=171]. 1928 (Ld, N, W).

*PAEPALANTHUS GOUNELLEANUS* Beauverd

Additional bibliography: Mold., *Phytologia* 29: 485--486. 1974; Mold., *Phytol. Mem.* 2: 154 & 614. 1980.

Citations: MOUNTED CLIPPINGS: Beauverd, *Bull. Herb. Boiss.*, ser. 2, 8: 292. 1908 (N, W).

*PAEPALANTHUS GRANATENSIS* Körn.

Additional bibliography: Mold., *Phytologia* 29: 486. 1974; Mold., *Phytol. Mem.* 2: 110 & 614. 1980.

*PAEPALANTHUS GRAO-MOGOLENSIS* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 29: 486--487. 1974; Mold., *Phytol. Mem.* 2: 154 & 614. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv. *Fl. Mont.* 1, 133--134, pl. 83. 1928 (Ld, N, W).

*PAEPALANTHUS GRISEUS* Mold.

Additional bibliography: Mold., *Phytologia* 29: 487. 1974; Mold., *Phytol. Mem.* 2: 122 & 614. 1980.

*PAEPALANTHUS GUARAIENSIS* Mold.

Additional bibliography: Mold., *Biol. Abstr.* 64: 4787. 1977; Mold., *Phytologia* 37: 45. 1977; Mold., *Phytol. Mem.* 2: 154 & 614. 1980.

Additional citations: MOUNTED ILLUSTRATIONS: Mold., *Phytologia* 36: 50, fig. 1. 1977 (Ld).

*PAEPALANTHUS GUSTAVII* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 29: 487--488. 1974; Mold., *Phytol. Mem.* 2: 154 & 614. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 227--228, pl. 150. 1928 (Ld, N, W).

*PAEPALANTHUS GUYANENSIS* Klotzsch

Additional bibliography: Mold., *Phytologia* 29: 488--489. 1974; Mold., *Phytol. Mem.* 2: 122 & 614. 1980.

Additional citations: MOUNTED CLIPPINGS: Klotzsch in Schomb., *Reise Brit.-Guian.* 3: 1064. 1848 (W).

*PAEPALANTHUS GYROTRICHUS* Ruhl.

Additional bibliography: Mold., *Phytologia* 41: 482. 1979; Mold., *Phytol. Mem.* 2: 154 & 614. 1980.

*PAEPALANTHUS HABENULIFER* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 29: 489--490. 1974; Mold., *Phytol. Mem.* 2: 154 & 614. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 263--265, pl. 175. 1928 (Ld, N, W).

*PAEPALANTHUS HARLEYI* Mold., *Phytologia* 45: 472, 474, & 475, pl. 3. 1980.

Bibliography: Mold., *Phytologia* 45: 472, 474, & 475, pl. 3. 1980; Mold., *Phytol. Mem.* 2: 154 & 614. 1980.

Illustrations: Mold., *Phytologia* 45: 474, pl. 3. 1980.

Collectors have described this plant as an erect herb, to 20 cm. tall, the leaves dark glaucous-green, the "culms" silvery-gray, and the involucre bracts dark and reflexed. They have found it growing on "metamorphic sandstone and quartzite rock outcrops with associated marsh, damp flushes and grassland and some cutover mixed deciduous woodland by streams and cerrado", at 1500--1600 m. altitude, in flower in March.

Citations: BRAZIL: Bahia: *Harley, May, Storr, Santos, & Pinheiro in Harley 18728* (Ld--isotype, N--isotype), 19650 (Ld, N, W--2936319).

*PAEPALANTHUS HARMSII* Ruhl.

Additional bibliography: Mold., *Phytologia* 29: 490. 1974; Mold., *Phytol. Mem.* 2: 154 & 614. 1980.

*PAEPALANTHUS HEMIGLOBOSUS* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 29: 490--491. 1974; Mold., *Phytol. Mem.* 2: 154 & 614. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 181--183, pl. 117. 1928 (Ld, N, W).

*PAEPALANTHUS HENRIQUEI* Alv. Silv. & Ruhl.

Additional bibliography: Mold., *Phytologia* 37: 45. 1977; Mold., *Phytol. Mem.* 2: 154, 401, 426, & 614. 1980.

Additional citations: BRAZIL: Santa Catarina: *Rambo 49606* (W--2653318).

*PAEPALANTHUS HERZOGII* Mold.

Additional bibliography: Mold., *Phytologia* 29: 492. 1974; Mold., *Phytol. Mem.* 2: 154 & 614. 1980.

Additional citations: MIUNTED CLIPPINGS: Herzog, *Feddes Repert. Spec. Nov.* 20: 87. 1924 (Ld, N, W).

*PAEPALANTHUS HETEROCAULON* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 29: 492--493. 1974; Mold., *Phytol. Mem.* 2: 154 & 614. 1980.

Additional citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 203--205, pl. 134. 1928 (Ld, N, W).

*PAEPALANTHUS HETEROPUS* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 29: 493. 1974; Mold., *Phytol. Mem.* 2: 154 & 614. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 139--140, pl. 87. 1928 (Ld, N, W).

*PAEPALANTHUS HETEROTRICHUS* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 29: 493. 1974; Mold., *Phytol. Mem.* 2: 154 & 614. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 200--201, pl. 132. 1928 (Ld, N, W).

*PAEPALANTHUS HILAIREI* Körn.

Additional & emended bibliography: Bong., *Mem. Acad. Imp. Sci. St. Petersb.*, ser. 6, 1: 620--621 & 637. 1831; Mold., *Phytologia* 37: 45, 269, & 271--273. 1977; Mold., *Phytol. Mem.* 2: 154, 369, 398, 400, 404, 426, & 614. 1980; Mold. in Harley & Mayo, *Toward Checklist Fl. Bahia* 74. 1980.

The *Damasio s.n.* [Herb. Jard. Bot. Rio Jan. 63741], distributed as typical *P. hilairei*, actually represents its var. *maximiliani* Ruhl.

*PAEPALANTHUS HILAIREI* var. *MAXIMILIANI* Ruhl.

Additional bibliography: Mold., *Phytologia* 37: 45. 1977; Mold., *Phytol. Mem.* 2: 154 & 614. 1980.

Berg describes this plant as an herb, 1 m. tall, with white "flowers", and encountered it in restinga alagada, in flower in August.

Additional citations: BRAZIL: Guanabara: C. C. Berg 235 (Ut--370659B). Minas Gerais: *Damasio s.n.* [Herb. Jard. Bot. Rio Jan. 63741] (Mi, W--2928662). Rio de Janeiro: Souza 99 [Herb. FEEMA 17316] (Ld).

*PAEPALANTHUS HILAIREI* var. *PIAUHYENSIS* Ruhl.

Additional bibliography: Mold., *Phytologia* 37: 45. 1977; Mold., *Phytol. Mem.* 2: 154 & 614. 1983.

*PAEPALANTHUS HILAIREI* var. *POHLIANUS* Mold.

Additional bibliography: Mold., *Phytologia* 37: 45. 1977; Mold., *Phytol. Mem.* 2: 154, 426, & 614. 1980.

*PAEPALANTHUS HISPIDISSIMUS* Herzog

Additional bibliography: Mold., *Phytologia* 37: 45. 1977; Mold., *Phytol. Mem.* 2: 154 & 614. 1980; Mold. in Harley & Mayo, *Toward Checklist Fl. Bahia* 74. 1980.

Recent collectors describe this plant as a neat rosette herb, to 6 cm. tall, the leaves closely appressed, firm, gray-green or rather dark-green, the involucre bractlets dark-brown, and the florets white. They have found it growing in "open scrub on white sand with damp areas and extensive sedge meadows (brejo) partly burned over", in sandy soil of campo rupestre, and among "sandstone rocks and open scrub on hillsides", at 500--1950 m. altitude, in both flower and fruit in February, July, and November. Photographs were made of the Mori & al. collection in situ.

Additional citations: BRAZIL: Bahia: Carvalho, Lewis, & Hage 1050 (Ld); Harley, Mayo, Storr, Santos, & Pinheiro in Harley 18763 (Ld, N, W--2936336), 18847 (N); Harley, Renvoize, Erskine, Brighton, & Pinheiro in Harley 16100 (W--2791569); Mori 12952 (Ld, N); Mori, King, Santos, & Hage 12599 (Ld, W--2854253).

*PAEPALANTHUS HOMOMALLUS* (Bong.) Mart.

Additional bibliography: Kunth, *Enum. Pl.* 3: 574. 1841; Mold., *Phytologia* 29: 485 & 501--502. 1974; Mold., *Phytol. Mem.* 2: 154 & 614. 1980.

Additional citations: MOUNTED CLIPPINGS: Kunth, *Enum. Pl.* 3: 574. 1841 (N, W).

*PAEPALANTHUS HYDRA* Ruhl.

Additional bibliography: Mold., *Phytologia* 37: 45. 1977; Mold., *Phytol. Mem.* 2: 154, 426, & 614. 1980.

Additional citations: BRAZIL: Minas Gerais: Maguire, Mendes Magalhães, & Maguire 49305 (W--2435328).

*PAEPALANTHUS HYMENOLEPIS* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 35: 26. 1976; Mold., *Phytol. Mem.* 2: 154 & 614. 1980.

Additional citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 183--184, pl. 118. 1928 (Ld, N, W).

*PAEPALANTHUS IBITIPOCENSIS* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 33: 43. 1976; Mold., *Phytol. Mem.* 2: 155, 426, & 614. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 54--55, pl. 30. 1928 (Ld, N, W).

*PAEPALANTHUS IMPLICATUS* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 30: 16--17. 1975; Mold., *Phytol. Mem.* 2: 155 & 614. 1980.

Additional citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 158--160, pl. 100. 1928 (Ld, N, W).

*PAEPALANTHUS INCANUS* (Bong.) Körn.

Additional bibliography: Mold., *Phytologia* 41: 482. 1979; Mold., *Phytol. Mem.* 2: 155, 426, & 614. 1980.

Additional citations: MOUNTED CLIPPINGS: Kunth, *Enum. Pl.* 3: 572. 1841 (N, W).

*PAEPALANTHUS INOPINATUS* Mold., *Phytologia* 45: 475 & 476, pl. 4. 1980.

Bibliography: Mold., *Phytologia* 45: 475 & 476, pl. 4. 1980; Mold., *Phytol. Mem.* 2: 155 & 614. 1980.

Illustrations: Mold., *Phytologia* 45: 476, pl. 4. 1980.

Citations: BRAZIL: Bahia: Harley, Mayo, Storr, Santos, & Pinheiro in Harley 20130 (Ld--isotype, N--isotype).

*PAEPALANTHUS INSIGNIS* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 30: 19. 1975; Mold., *Phytol. Mem.* 2: 155 & 614. 1980.

Additional citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 193--194, pl. 127. 1928 (Ld, N, W).

*PAEPALANTHUS INTERMEDIUS* Körn.

Additional bibliography: Mold., *Phytologia* 37: 46. 1977; Mold., *Phytol. Mem.* 2: 155 & 614. 1980.

*PAEPALANTHUS ITACAMBIRENSIS* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 30: 20. 1975; Mold., *Phytol. Mem.* 2: 155 & 614. 1980.

Additional citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 123--124, pl. 75. 1928 (Ld, N, W).

*PAEPALANTHUS ITAMBEENSIS* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 37: 46. 1977; Mold., *Phytol. Mem.* 2: 155 & 614. 1980.

Additional citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 46--47, pl. 24. 1928 (Ld, N, W).

*PAEPALANTHUS ITATIAIENSIS* Ruhl.

Emended synonymy: *Paepalanthus itatiayensis* Ruhl. in Wettstein, *Denkschr. K. Akad. Wiss. Wien Math.-Nat.* 79: 87. 1908.

Additional bibliography: Ruhl. in Wettstein, *Denkschr. K. Akad. Wiss. Wien Math.-Nat.* 79: 87. 1908; Mold., *Phytologia* 37: 46. 1977; Mold., *Phytol. Mem.* 2: 155, 426, & 614. 1980.

Recent collectors describe this plant as an herb, to 25 cm. tall, with whitish inflorescences, and have found it growing in rocky soil among low vegetation on rocky hills, at 2000--2500 m.

altitude, in flower in September and October.

Additional citations: BRAZIL: Minas Gerais: *Bogner 1157* (Ld--photo); *Hatschbach & Kummrow 45554* (Ld). Rio de Janeiro: *Maas & Martinelli 3181* (Ld).

*PAEPALANTHUS ITATIAIENSIS* var. *GLABER*

Additional bibliography: Mold., *Phytologia* 30: 22. 1975; Mold., *Phytol. Mem.* 2: 155, 426, & 614. 1980.

*PAEPALANTHUS ITHYPHYLLUS* (Mart.) Mart.

Additional bibliography: Mold., *Phytologia* 37: 46. 1977; Mold., *Phytol. Mem.* 2: 155, 398, 401, 404, 426, 428, & 614. 1980.

*PAEPALANTHUS JAUENSIS* Mold.

Synonymy: *Paepalanthus jausensis* Mold., *Phytol. Mem.* 2: 426, in syn. 1980.

Additional bibliography: Mold., *Phytologia* 41: 482 (1979) and 44: 215. 1979; Mold., *Phytol. Mem.* 2: 117, 426, & 614. 1980; Mold., *Phytologia* 54: 264. 1983.

Recent collectors describe this plant as having pale-green "subcoriaceous" [but the herbarium material exhibits only thin apparently quite pliable!] leaves and white inflorescences. They have encountered it in dense clumps, at 2300--2580 m. altitude, in flower in October and both in flower and fruit in January and February.

Additional citations: VENEZUELA: Amazonas: *Steyermark 103840* (Ld, N, N); *Steyermark, Guariglia, Holmgren, Luteyn, & Mori 125932* (Ld), 126295 (Ld).

*PAEPALANTHUS JAUENSIS* var. *CAULESCENS* Mold., *Phytologia* 44: 215. 1979.

Bibliography: Mold., *Phytologia* 44: 215. 1979; Mold., *Phytol. Mem.* 2: 117 & 614. 1980.

Maguire and his associates refer to this as a "sterile plant with elongate caudex" and found it growing at the edge of a canyon escarpment, at 2685 m. altitude, identifying it as *P. duidae* Gleason.

Citations: VENEZUELA: Amazonas: *Maguire, Steyermark, Brewer-Carías, Maguire, & Espinosa 65639*(E--2901868). Bolívar: *Steyermark, Espinosa, McDiarmid, & Brewer-Carías 115893* (Ld--type).

*PAEPALANTHUS JORDANENSIS* Alv. Silv.

Additional bibliography: Mold., *Phytologia* 30: 24. 1975; Mold., *Phytol. Mem.* 2: 155, 426, & 614. 1980.

Citations: MOUNTED CLIPPINGS & ILLUSTRATIONS: Alv. Silv., *Fl. Mont.* 1: 92--93, pl. 56 & 57. 1928 (Ld, N, W).

*PAEPALANTHUS KANAII* Satake

Additional bibliography: Mold., *Phytologia* 41: 482. 1979; Mold., *Phytol. Mem.* 2: 301 & 614. 1980.

[to be continued]